

REMARKS/ARGUMENTS

This paper is submitted in response to the Office Action mailed September 9, 2005. In the Office Action, the Examiner rejected claims 1-17 under 35 U.S.C. §103(a) as being obvious over U.S. Pub. Patent App. No. 2001/0040581 to Reddy (hereinafter "Reddy") in view of U.S. Patent No. 6,006,248 to Nagae (hereinafter "Nagae").

In view of the following remarks, immediate allowance of claims 1-17 is respectfully requested.

Rejection of claims 1-17 under 35 U.S.C. §103(a) by Reddy in view of Nagae

In the Office Action, the Examiner rejected claims 1-17 under 35 U.S.C. §103(a) as being obvious over Reddy in view of Nagae. MPEP §2143 provides that the *prima facie* obviousness of a claim is established only if the Examiner shows that (1) there is some teaching, suggestion, or motivation, either in the reference itself or in the knowledge generally available to one of ordinary skill in the art, to modify the reference; (2) there is a reasonable expectation of success; and (3) the prior art teaches or suggests all of the claim elements. Applicants respectfully assert that the *prima facie* obviousness of claims 1-17 has not been established because Reddy and Nagae, either singly or in combination, do not teach or suggest all of the elements of claims 1-17.

Specifically, claims 1-5 provide the step of "allocating said graphics data to either said central processing unit or said transformation/lighting engine of said graphics processor according to said utilization rate of said central processing unit." Similarly, claims 6-10 provide the steps of "allocating said vertex data to said transformation/lighting engine of said graphics processor when said utilization rate of said central processing unit is greater than a first threshold value; and allocating said vertex data to said central processing unit when said utilization rate of said central processing unit is less than a second threshold value." Likewise, claims 11-17 provide "allocating said graphics data to either said central processing unit or transformation/lighting engine of said graphics processor according to a utilization rate of said central processing unit."

In contrast, Reddy is directed to a "graphics accelerator [that] selectively distributes display data to the on-chip frame buffer memory element and to the off-chip frame buffer

memory element based on predetermined display data distribution criteria.” Reddy, abstract. Furthermore, the Examiner noted that “Reddy is silent about detecting a utilization rate of said central processing unit and allocating said graphics data to either said central processing unit or said graphics processor according to said utilization rate of said central processing unit.” Office Action, page 2, paragraph 2, part a.

Similarly, Nagae does not disclose allocating graphics data to either a central processing unit or a graphics processor according to the utilization rate of the central processing unit. Instead, Nagae is directed to “a system for distributing a job ... among a plurality of computers which monitors a load of each computer system and determines to move a job application loaded to each computer system to [an]other computer system ... so as to distribute the load among a plurality of computers which share a common storage device.” Nagae, col. 1, lines 10-14. In other words, job applications are individually distributed to different computer systems that share a common storage device, and not between the individual resources of a single computer system.

However, Nagae does not teach or suggest allocating graphics data to either a central processing unit or a graphics processor according to the utilization rate of the central processing unit. Furthermore, as is recognized by those of skill in the art, job applications and graphics data are not equivalent.

Therefore, Reddy and Nagae, singly or in combination, do not teach or suggest all of the elements of claims 1-17. Consequently, the *prima facie* obviousness of claims 1-17 has not been established and claims 1-17 are patentable over Reddy in view of Nagae. Thus, Applicants respectfully request withdrawal of this rejection.

Additionally, Reddy and Nagae do not teach or disclose other elements of claim 1-17. For example, nowhere in Reddy or Nagae is a transformation/lighting engine taught or disclosed. Furthermore, nowhere in Reddy or Nagae is a path selection unit incorporated in a north bridge chip taught or disclosed. In another example, neither Reddy nor Nagae teaches or suggests that the graphics data are vertex data. Thus, Applicants submit that claims 1, 2, 4, 6, 7, 11, 13, 14, and 17 are patentable for these reasons over Reddy in view of Nagae.

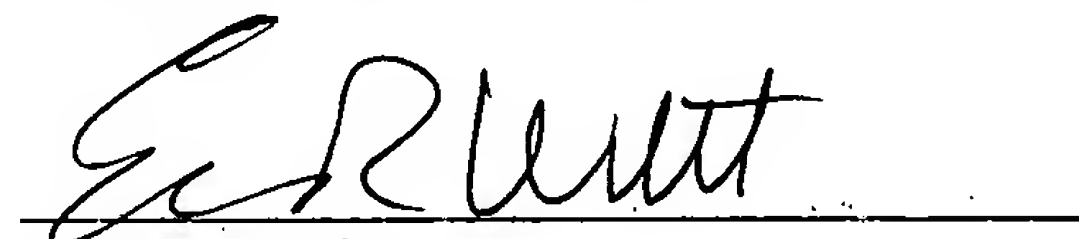
Additionally, MPEP §2143.01 expressly states that “If proposed modification would render the prior art invention being modified unsatisfactory for its intended purpose, then there is

no suggestion or motivation to make the proposed modification.” *Citing In re Gordon*, 733 F.2d 900, 221 USPQ 1125 (Fed. Cir. 1984). By combining Reddy and Nagae, each computer of the plurality of computer systems likely includes Reddy’s CPU and IGDM. Consequently, under this architecture, one of skill in the art would reasonably conclude that the processing task of 3D graphics data is executed by the graphics processor only in each computer in order to obtain the memory enhancement of Reddy.

However, to combine Reddy and Nagae as suggested by the examiner, would undermine the purpose of Reddy to increase “the performance of the graphics display system because display data retrieval from the on-chip frame buffer is much faster than from an external frame buffer and the DRAM timing constraints are reduced.” Specifically, the combination of Reddy with Nagae would not have the benefit of the on-chip frame buffer if the display data is routed to the CPU. Thus, the proposed modification would render invention of Reddy unsatisfactory for its intended purpose. Consequently, there is insufficient motivation to combine Reddy with Nagae. Thus, Applicants respectfully request withdrawal of this rejection for this additional reason.

In view of the foregoing, allowance of all pending claims 1-17 is respectfully requested. Therefore, Applicant respectfully requests that a timely Notice of Allowance be issued in this case. If there are any remaining issues preventing allowance of the pending claims that may be clarified by telephone, the Examiner is requested to call the undersigned.

Respectfully submitted,



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